



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: GENx-1B70/P2 BYPASS RATIO: 8.8  
 UNIQUE ID NUMBER: 01P17GE210 PRESSURE RATIO ( $\pi_{00}$ ): 43.9  
 COMBUSTOR: TAPS  
 ENGINE TYPE: TF RATED THRUST ( $F_{00}$ ) (kN): 321.6

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	0.8	20.1	45.5	0.8
AS % OF ORIGINAL LIMIT	4.0	17.0	35.6	4.4
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			44.5	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			48.0	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			52.5	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			58.4	

For non-volatile particulate matter (nvPM) emissions, please refer to the ICAO Engine nvPM Emissions Data Sheet.

### DATA STATUS

- PRE-REGULATION  
 x CERTIFICATION  
 - REVISED (SEE REMARKS)

### TEST ENGINE STATUS

x NEWLY MANUFACTURED ENGINES  
 x DEDICATED ENGINES TO PRODUCTION STANDARD  
 - OTHER (SEE REMARKS)

### EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
 (ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
 - OUT OF PRODUCTION (DATE: - )  
 - OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>00</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO <sub>x</sub>	
TAKE-OFF	100	0.7	2.504	0.02	0.06	34.77	0.2
CLIMB OUT	85	2.2	2.042	0.02	0.17	20.87	0.2
APPROACH	30	4.0	0.654	0.05	1.82	11.02	0.3
IDLE	7	26.0	0.213	0.44	14.78	4.85	0.1
LTO TOTAL FUEL (kg) or EMISSIONS (g)			865	162	5256	12629	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				0.5	16.3	39.3	0.6
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				0.0	0.0	0.3	0.3
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				0.47-0.54	16.32-16.36	39.02-39.52	0.35-0.97

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT All POWER SETTINGS  
 STAGE BLEED 0 (% CORE FLOW) AT All POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	98.1-98.5
TEMPERATURE (K)	295.1-298.8
ABS HUMIDITY (kg/kg)	0.01189-0.01439

### FUEL

SPEC	Jet A
H/C	1.89
AROM (%)	15.4

MANUFACTURER: General Electric Company  
 TEST ORGANIZATION: General Electric Company  
 TEST LOCATION: PTO, Ohio  
 TEST DATES: 19/06/2012-21/06/2012

### NO<sub>x</sub> REGULATION PARAGRAPH

	2.3.2 c) (CAEP/4)
	2.3.2 d) (CAEP/6)
x	2.3.2 e) (CAEP/8)

### REMARKS

1. Ref. GE REPORT R2010AE907
2. Engine S/N 956-101/4
3. Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
4. NO<sub>x</sub> levels in accordance with Part III, Chapter 2, 2.3.2 e) (CAEP/8)

Compliance with Fuel Venting requirements: x ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)